

CLAIMS:

1. Electroluminescent device (100,200,300) comprising at least one picture element (110,200,300), said at least one picture element comprising a plurality of electroluminescent sub-pixels (201,202,203,301,302,304) capable of emitting light when subject to electric current, the sub-pixels each having a degradation lifetime and an emissive area, characterized in that, for any pair of first and second sub-pixels in a picture element, the ratio between the first sub-pixel emissive area and the second sub-pixel emissive area is inversely proportional to the ratio between the degradation lifetime of said first sub-pixel and the degradation lifetime of the second sub-pixel.

2. Device as claimed in claim 1, where any of said sub-pixel emissive areas comprises a plurality of discrete emissive area parts (303,305).

3. Device as claimed in claim 1 or 2, where said ratio between the first sub-pixel emissive area (A_1) and the second sub-pixel emissive area (A_2) follows the relation:

$$\frac{A_1}{A_2} = \frac{\gamma_2}{\gamma_1} \cdot \frac{\eta_2}{\eta_1} \cdot \frac{\alpha_1}{\alpha_2}$$

where γ , η and α , with index 1 representing the first sub-pixel and index 2 representing the second sub-pixel, are respective measurable material parameters, where η represents the efficiency of conversion of electric current to light, γ is a scaling factor depending on the efficiency, brightness and lifetime, and α is, in units of total output light by the picture element, the fraction emitted by the respective sub-pixel.

4. Device as claimed in claim 1,2 or 3, where said at least one picture element comprises three sub-pixels, said sub-pixels being denoted R-, G- and B-sub-pixel, respectively, and where the relation between the areas A_R , A_G and A_B of respective R-, G- and B-sub-pixels follows from the relation: $\frac{\gamma_R \eta_R A_R}{\alpha_R} = \frac{\gamma_G \eta_G A_G}{\alpha_G} = \frac{\gamma_B \eta_B A_B}{\alpha_B}$

5. Device as claimed in any one of claims 1-4, where the sub-pixels comprise electroluminescent organic material.

6. Device as claimed in claim 5, where the organic material includes electroluminescent polymer.

5 7. Device as claimed in claim 5, where the organic material includes electroluminescent low molecular weight material.

8. Device as claimed in any one of claims 1-4, where the sub-pixels comprise electroluminescent inorganic material.

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9. Device as claimed in any one of claims 1-8, where the at least one picture element is arranged to provide illumination.

10. Device as claimed in any one of claims 1-8, where the at least one picture
15 element is arranged in a matrix (101) configuration in a colour display unit.